UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/296,217	04/22/99	BURTS	B 23267/15D1

EXAMINER	
CROSS,L	
ART UNIT	PAPER NUMBER
1743	16

DATE MAILED: 09/07/01

IM52/0907
GILBRETH & ASSOCIATES, P.C.
P O BOX 61305
HOUSTON TX 77208-1305

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/296,217	BURTS, BOYCE D.	
	Examiner	Art Unit	
	LaToya I. Cross	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

This Office Action is in response to Applicants' remarks filed on June 19, 2001. Claims 1-13 are pending in the instant application. The title of this application is "Well Lost Circulation Additive, Lost Circulation Treatment Fluid made therefrom, Method of Minimizing Lost Circulation in a Subterranean Formation". Applicants' response is entitled "Conformance Improvement Additive". Applicants should pay very careful attention to the naming of this application and its related counterparts to avoid confusion in the future prosecution of the case.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.3218 may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/296,216. Although the conflicting claims are not identical, they are not patentably distinct from each other because while the instant claims recite

"lost circulation additive" and the claims of the copending application recite "conformance additive", both additives comprise the same components. While the preamble appears to be different, it is known in the art that the types of compositions claimed by Applicants are suitable for both conformance fluids and lost circulation fluids. The two additives are essentially the same.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 08/962,209. Although the conflicting claims are not identical, they are not patentably distinct from each other because while the instant claims recite "lost circulation additive" and the claims of the copending application recite "tubing/casing plug additive", both additive comprise the same components. While the preamble appears to be the same, it is known in the art that these types of additives are suitable for both lost circulation and tubing/casing plugging.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/307,544. Although the conflicting claims are not identical,

they are not patentably distinct from each other because while the instant claims recite "lost circulation additive" and the claims of the copending application recite "well plug additive", the additives comprise the same components. While the preamble appears to be different, it is known that these types of additives are suitable for both lost circulation and well plugging.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,989,673 to Sydansk (hereinafter Sydansk '673) in view of Githens '979.

Applicants' claimed invention is directed to a lost circulation additive comprising a dry mixture of a water-soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

Sydansk '673 teaches a cross linked gel which functions as a lost circulation fluid by coating and plugging the wellbore face to prevent flow of fluids across a face (col. 7, lines 6-8). The cross linked gel comprises a water-soluble polymer and a cross linking agent. See abstract. The water-soluble polymer is a carboxylate-containing polymer

having one or more carboxylate groups (col. 3, lines 24-36). A preferred water soluble polymer of Sydansk '673 is partially hydrolyzed polyacrylamide, such as recited in instant claim 7 (col. 3, lines 37-54). The cross linking agent is a chromic carboxylate complex, such as recited in instant claim 2 (col. 3, lines 55-64). Sydansk '673 also teaches the additional use of inert solids, such as sand, fiberglass, cellulosic fibers, and plastic fibers to enhance the strength of the gel formed by the polymers and cross linking agents (col. 6, lines 57-61).

Sydansk '673 differ from the instantly claimed invention in that Sydansk does not appear to teach a dry mixture of water soluble crosslinkable polymer, crosslinking agent, and reinforcing material.

Githens '979 teach a dry mixture of a crosslinking compound and a hydratable gelling agent, wherein the dry mixture can be activated by the addition of water. Githens '979 teach crosslinking compounds gelling agents similar to those used by Applicants. Githens '979 further teach that the use of dry mixture of components provides good storage stability for at least three months.

Thus, in view of the teachings of Githens '979 it would have been obvious to one or ordinary skill in the art to use a dry mixture of the components of Sydansk '673 to provide better storage stability for the components.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 U.S.C. 103, in view of the teachings of Sydansk '673 and Githens '979.

7. Claims 1-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,377,760 to Merrill (hereinafter Merrill '760) in view of Githens '979.

Applicants claimed invention is directed to a lost circulation additive comprising a dry mixture of a water-soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

Merrill '760 discloses gels capable of blocking or plugging relatively large openings in permeable formations. The gels of Merrill '760 also useful in improving the conformance of formations encountered in the drilling and production of hydrocarbons from subterranean wells (col. 1, lines 12-16). The gels of Merrill '760 comprise a partially hydrolyzed carboxylate-containing polymer and a chromic carboxylate complex as a cross-linking agent, such as recited in instant claim 2. The preferred hydrolyzed polymer is a partially hydrolyzed polyacrylamide polymer, such as recited in instant claim 7 (col. 2, lines 63-68). Merrill '760 also discloses the use of reinforcing materials which are incorporated into the gels. These reinforcing materials include hydrophilic fibers and hydrophobic fibers. The hydrophilic fibers are those such as glass, cellulose, carbon, silicon, graphite, coke, cotton fibers, and mixtures. The hydrophobic fibers are those such as nylon, rayon, hydrocarbon fibers, and mixtures, such as recited in instant claim 3 (col. 4, lines 14-25).

Merrill '760 differs from the instantly claimed invention in that there is no specific teaching to the combined use of both hydrophilic and hydrophobic reinforcing materials.

However, since both of the reinforcing materials are disclosed as being used for the same purpose of enhancing the gels formed from the hydrolyzed polymers and cross linking agents, it would have been obvious to one of ordinary skill in the art to combine the two types of reinforcing materials. Absent evidence to the contrary, the use of both types of reinforcing materials (hydrophilic and hydrophobic) would result in an effective additive for use as a lost circulation additive.

Merrill '760 also differ in that there is no disclosure of a dry mixture of components.

Githens '979 teach a dry mixture of a crosslinking compound and a hydratable gelling agent, wherein the dry mixture can be activated by the addition of water. Githens '979 teach crosslinking compounds gelling agents similar to those used by Applicants. Githens '979 further teach that the use of dry mixture of components provides good storage stability for at least three months.

Thus, in view of the teachings of Githens '979 it would have been obvious to one or ordinary skill in the art to use a dry mixture of the components of Merrill '760 to provide better storage stability for the components.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious within the meaning of 35 U.S.C. 103, in view of the teachings of Merrill '760 and Githens '979.

8. Claims 1, 2, and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,004,553 to House et al (herein referred to as House et al '553) in view of U.S. Patent 3,208,524 to Horner et al (herein referred to as Horner et al '524) and Githens '979.

Applicants claimed invention is directed to a lost circulation additive comprising a dry mixture of a water-soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

House et al '553 disclose seepage loss fluids for well working applications. The fluids of House et al '553 comprise a combination of reinforcing materials such as oat hulls, corn cobs, cotton, citrus pulp, and cotton burrs. House et al '553 also disclose the conventional use of particulates of peanuts, almond, cocoa bean, cottonseed, rice, cotton linters, wool, paper, straw, wood fibers, etc. (col. 2, lines 7-27). House et al '553 disclose the use of the reinforcing particulate material in combination with a crosslinkable polymer (col. 5, lines 1-5). House et al '553 discloses suitable crosslinkable polymer as those described in U.S. Patent 4,722,397 to Sydansk (col. 20-38). The crosslinkable polymers of Sydansk '397 comprise a water-soluble carboxylate containing polymer and a cross linking agent such as chromic carboxylate complex, such as instantly claimed by Applicants. (See abstract of Sydansk '397.) The use of the cross-linkable polymer in combination with the reinforcing particulate materials forms a plugging agent for boreholes (col. 5, lines 1-9). House et al '553 further disclose the preparation of the fluids by adding the seepage loss additives to water based well working fluids (col. 5, lines 39-68 and col. 6, lines 1-25).

House et al '553 differ from the instantly claimed invention in that there is no disclosure of the use of cellophane in the seepage loss additives. There is also no disclosure of the use of the fluids of House et al '553 as conformance additives.

Horner et al '524 teach loss circulation fluids similar to those disclosed by House et al '553 in that they comprise crosslinkable polymers. Horner et al '524 teach the employment of bulking agents into the polymer gels to reduce the amount of gel required and to permit the plugging of large fissures which might otherwise be difficult to plug (col. 5, lines 42-48). As bulking agents, Horner et al '524 discloses cellophane and a variety of other fibrous, flaky or granular materials.

Thus, in view of the teaching of the use of cellophane in combination with other fibrous, flaky or granular materials in loss circulation additives for well working fluids, it would have been obvious to one of ordinary skill in the art to employ cellophane as an additional component of the loss circulation additive of House et al '553. One of ordinary skill in the art would expect that the addition of cellophane to the fluids of House et al '553 would result in a loss circulation additive similar to that instantly claimed by Applicants, absent evidence to the contrary.

With respect to House et al '553 not teaching the use of those fluids as conformance additives, it is known in the art that fluids such as those disclosed by House et al '553 are useful in improving conformance.

Also, neither House et al '553 or Horner et al '524 disclose the use of a dry mixture of components.

Githens '979 teach a dry mixture of a crosslinking compound and a hydratable gelling agent, wherein the dry mixture can be activated by the addition of water. Githens '979 teach crosslinking compounds gelling agents similar to those used by Applicants. Githens '979 further teach that the use of dry mixture of components provides good storage stability for at least three months.

Thus, in view of the teachings of Githens '979 it would have been obvious to one or ordinary skill in the art to use a dry mixture of the components of House et al '553 and Horner et al '524 to provide better storage stability for the components.

Therefore, for the reasons set forth above, Applicants' instantly claimed invention is deemed to be obvious within the meaning of 35 U.S.C. 103, in view of the teachings of House et al '553 and in view of Horner et al '524 and Githens '979.

Response to Arguments

9. Applicant's arguments filed June 19, 2001 have been fully considered but they are not persuasive.

Applicants' concern with each rejection under 35 USC 103 is 1) each primary reference (Sydansk, Merrill and House) does not teach a dry mixture of polymer, cross-linking agent and reinforcing material and 2) the secondary reference (Githens), which teaches a dry mixture, does not teach the use of reinforcing agents in the dry mixture.

Applicants seemingly argue each reference separately and not the combination of the teachings of the primary reference and the secondary reference. One cannot show nonobviousness by attacking references individually where the rejections are

based on combination of references. *In re Keller*, 642 F.2d 413, *In re Merck & Co., Inc.* 800 F.2d 1091. Applicants may be correct in their statements regarding the primary references and secondary reference individually. However, when the teachings of the art taken as a whole, each of the claimed limitations is disclosed.

Each of Sydansk, Merrill, and House in view of Horner, teaches the combination of polymer, cross-linking agent, and reinforcing material. As previously noted, the difference between the teachings of these references and the instantly claimed invention lays in the lack of disclosure a dry mixture of the components. Githens readily recognizes the need for dry mixed components which can be activated upon addition of water to provide a viscous fluid having rheological properties suitable for well use. It is noted that Githens does not teach the additional use of reinforcing material. Needless to say, if such teachings were present, Githens alone would anticipate the claims. Nevertheless, each primary reference does teach reinforcing materials. In fact, the reinforcing materials in each reference are in dry form. See col. 6, lines 57-61 of Sydansk '673, col. 4, lines 18-25 of Merrill '760 and col. 2, lines 48-68 of House '553. Applicants have stated that when Sydansk, Merrill, and House are used in combination with Githens, the teachings lead one to first render the dry mixture a solution by the addition of water, and then add the reinforcing material to the wet solution. The Examiner disagrees with this statement. When the teachings of Sydansk, Merrill and House are taken in combination with Githens, it is submitted that the skilled artisan would use a dry mixture of the components of the primary reference (polymer, crosslinking agent and reinforcing material) since the Githens reference teaches that a

dry mixture is more storage stable and is able to be readily activated upon the addition of water.

Therefore, for these reasons, Applicants' claimed invention remains to be deemed obvious in view of the teachings of the above-mentioned references.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is (703) 305-7360. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached at (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LIC 8/C

August 30, 2001

Jill Warden
Supervisory Patent Examiner
Technology Center 1700